

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/28/99

Date Received: 09/02/99

Project: Metro Self Monitor, PO# M62543

Date Samples Extracted: 09/14/99

Date Extracts Analyzed: 09/20/99 & 09/22/99

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

<u>Sample ID</u>	<u>Chromium</u>	<u>Copper</u>	<u>Nickel</u>	<u>Zinc</u>
M62543	0.33	0.26	0.31	0.07
Method Blank	<0.05	<0.05	<0.05	<0.05

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 909015-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	<0.05	<0.05	nm	0-20
Copper	mg/L (ppm)	0.45	0.40	12	0-20
Nickel	mg/L (ppm)	<0.05	<0.05	nm	0-20
Zinc	mg/L (ppm)	1.0	1.0	0	0-20

Laboratory Code: 909015-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	<0.05	116	114	80-120	2
Copper	mg/L (ppm)	5	0.45	102	99	80-120	3
Nickel	mg/L (ppm)	10	<0.05	104	104	80-120	0
Zinc	mg/L (ppm)	5	1.1	106	106	80-120	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	% Recovery LCS	% Recovery LCSD	Acceptance Criteria	RPD
Chromium	mg/L (ppm)	5	97	110	80-120	13
Copper	mg/L (ppm)	5	107	103	80-120	4
Nickel	mg/L (ppm)	10	99	111	80-120	11
Zinc	mg/L (ppm)	5	95	119	80-120	22 vo

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

vo - The value reported fell outside the control limits established for this analyte.

(DH 9-2-99 AI,

SAMPLE CHAIN OF CUSTODY

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 28, 1999

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on September 2, 1999 from your Metro Self Monitor, PO# M62543 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Dianne C. Hurt
Project Manager

Enclosures
ACU0928R.DOC

FRIEDMAN & BRUYA, INC.

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September 28, 1999

DUPLICATE COPY

INVOICE #99ACU0928-3

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M62543: Results of testing requested
by Gerry Thompson for material submitted on September 2, 1999.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$80 per sample

\$ 80.00

Amount Due

\$ 80.00

PLEASE NOTE: As a convenience for our valued clients, we can accept credit cards (VISA, MasterCard or government purchasing cards) for payment on our invoices. Please contact our office if you would like to take advantage of this service.

FEDERAL TAX ID: (b) (6)